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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,774	11/14/2003	Byung-Ho Chang	46039	7408

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EXAMINER

DANG, ROBERT TRONG

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/712,774

Applicant(s)

CHANG ET AL.

Examiner

Robert T. Dang

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-8, 11-13 and 15-21 is/are rejected.
- 7) ☒ Claim(s) 9, 10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification on page 9, states "2,34mm" while claim 6 recites "two 34 mm strips".

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 is not clear because "34 mm thick foil strip" lacks sufficient antecedent basis in the specification so that it is also further not clear which direction the thickness runs.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

2. Claims 1-5, 7, 11-13, 15, 17, 18-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Inauen (2005/0243493).

As to claim 1, Inauen discloses a surge protection device in figure 9 for protecting equipment from impulse surges, said device comprising a high frequency line (3), and a

first decoupling filter (6/61) formed as a  $\lambda/4$  section and a gas arrestor (53), sequentially connected to the high frequency line (3), said gas arrestor being connected between the first decoupling filter (6/61) and the ground, wherein said device further comprises: a low frequency line (2/4) and a second decoupling filter (5/60) connected in series between an output terminal, through which a signal flows into a circuit, and a contact point between the first decoupling filter and the gas arrestor, said low frequency line including a low voltage limiter (51) and a low pass filter (52); and a T-shaped high pass filter connected to the high frequency line.

As to claims 2 and 20, Inauen discloses a surge protection device in figure 9, wherein the low voltage limiter includes a two-directional diode which is also known as a TransZorb diode (51) which is the conductor that goes from terminals 20 or 21 to ground, since it passes low frequencies (see col. 1, lines 59-67 of 5513059 – evidence that TransZorb is a trade name that indicates a dual directional diode). The breakdown voltage is equal to a supply voltage to be provided, where the claim is interpreted such that no supply voltage is positively claimed, since it is “to be provided”. That is, the diode breakdown voltage is equal to some supply voltage that is later provided.

As to claim 3, Inauen discloses a surge protection device in figure 9, wherein the low pass filter in the low frequency line is able to withstand voltage of surges occurring due to breakdown of the gas arrestor.

As to claim 4, Inauen discloses a surge protection device in figure 9 the surge protection device, wherein the high frequency line comprises a band pass filter consisting of elements 44-46.

As to claim 5, Inauen discloses a surge protection device in figure 9 the surge protection device, wherein: first and second strips (wire), first and second capacitors (43&47) and a first inductor (44) disposed between the input and output terminals.

As to claim 7, Inauen discloses a surge protection device in figure 9, the surge protection device, wherein one end of the first inductor (44) is connected to the first and second strips (wire) and an opposing end of the conductor is connected to ground.

As to claim 11, Inauen discloses in figure 9, the surge protection device, wherein the circuit connected to the output terminal comprises an antenna (see page. 3, line [0035])

As to claim 12, Inauen discloses in figure 9, a surge protection device having a high frequency line (3), a gas arrestor (53) and a first decoupling filter (48) disposed between an input terminal and an output terminal, said surge protection device being adapted to protect a communication device from a high voltage, high frequency signal and from a high voltage low frequency signal, said surge protection device, comprising: a low frequency line (2/4), adapted to divert a high voltage, high frequency signal from said high frequency line when said high voltage, high frequency signal is applied to said input terminal; and a second decoupling filter (5/60), adapted to filter said high voltage, low frequency signal from said low frequency line.

As to claim 13, Inauen discloses in figure 9, the surge protection device, wherein said low frequency line comprises a low pass filter.

As to claim 15, Inauen discloses in figure 9, the surge protection device according wherein said bidirectional diode (51) selectively providing an input signal to ground or to said second decoupling filter see page 6, line [0059]

As to claim 17, Inauen discloses in figure 9, the surge protection device according to claim 16, wherein said input signal is an unwanted impulse signal, which recites conventional practice in the art.

As to claim 18, Inauen discloses in figure 9, the claimed structure as noted above that implicitly supports the method of providing surge protection for a communication system, said method comprising: detecting a presence of an impulse signal; providing said impulse signal to a low frequency line if said impulse signal comprises a high voltage, low frequency signal; and providing said impulse signal to a high frequency line if said impulse signal comprises a high voltage, high frequency signal.

As to claim 19, Inauen discloses in figure 9, wherein the high frequency line includes a high pass filter and the low frequency line includes a low pass filter.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inauen (2005/0243493) in view of Ruckman (4571656).

As to claims 8 and 16, Inauen discloses surge protection device according to claim 1; however, he does not explicitly disclose the impulse surge being between 100 and 200 volts. Ruckman discloses a surge protection device where the impulse surge is between 100-200 volts (see col. 2, lines 60-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device to protect against impulse surges such as described above to protect semiconductor elements from being damaged.

***Allowable Subject Matter***

Claims 9-10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

For claims 9-10, the prior art of record does not disclose or suggest in the claimed combination: a surge protection device wherein said low frequency line further comprises a third and fourth capacitors and second and third inductors wherein the inductance of the second inductor selectively limits an input current. For claim, the prior art of record does not disclose or suggest in the claimed combination: wherein said low frequency line comprises a first and second capacitor, and a first and second inductor.

The art of record does not disclose or suggest the above claimed features, nor would it be obvious to modify the art of record so as to include either of the above limitations.

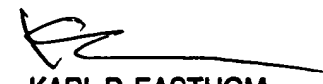
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert T. Dang whose telephone number is 571-272-8326. The examiner can normally be reached on M-F, 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl Easthom can be reached on 571-272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RTD

  
**KARL D. EASTHOM**  
**PRIMARY EXAMINER**